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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,169	01/09/2002	Michael Krengel	GER 5355	8306

27572 7590 08/12/2003

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EXAMINER
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SHAW, CLIFFORD C

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 08/12/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/980,169

Applicant(s)

KRENGEL ET AL.

Examiner

Clifford C Shaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15, 17, 18, 23-26, 28-35, 37, 39-41, 43, 44, 46, 47 and 49-59 is/are rejected.
- 7) ☒ Claim(s) 13, 14, 19-22, 27, 36, 38, 42, 45, 48, 60 and 61 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**Detailed Action**

1.) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2.) Claims 1-12, 15, 17, 18, 23-26, 28-35, 37, 39-41, 43, 44, 46, 47, 49-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann et al. (5,938,945, previously applied) taken with Reid (4,434,348) and Dixon (3,278,720). The patent to Hofmann et al. discloses a lift and strike welding arrangement wherein two workpieces are welded together with features claimed including an arrangement at elements 16 and 22 for reversing the polarity of the arc during the process. In column 3, lines 10-20 of the patent to Hofmann et al., reference is made to this polarity reversal being useful in "breaking of oxide skins". The claims differ from Hofmann et al. in calling for cleaning of the workpieces, in calling for a particular type of stud as in claim 4, and in calling for steel workpieces, as for example in claims 23 and 24. These differences do not patentably distinguish over the prior art. While the patent to Hofmann et al. does not explicitly use the term "cleaning", it is considered obvious that the oxide breaking discussed in Hofmann et al. is in fact cleaning in view of the discussions in Reid and Dixon wherein oxide cleaning with an arc is discussed (see column 2, lines 10-20 in Reid and see column 1 in Dixon). It is considered obvious that the arc in Hofmann et al. will necessarily clean any organic coating such as a lubricant on either the stud or the workpiece in view of the

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discussion in column 1, lines 1-65 of Dixon where the cleaning effects of an arc are discussed.

In regard to the claims directed to particular studs or steel workpieces, it would have been obvious to have used the arrangement of Hofmann et al. for any well known type of stud and workpiece, including those claimed, the motivation being to secure the advantages of this arrangement for those workpieces.

3.) Claims 13, 14, 19-22, 27, 36, 38, 42, 45, 48, 60, and 61 are objected to for depending from rejected claims, but would be given favorable consideration if suitably recast in independent form to include all of the limitations of their parent claims. The prior art of record does not teach the particular distances during particular portions of the welding process as set forth in claims 13, 14, 38, and 48. The prior art of record does not teach the particular polarity reversal arrangements set forth in claims 20-22, 60, and 61. The prior art of record does not teach the particular evaluation device set forth in claim 19. The prior art of record does not teach the particular voltages set forth in claims 27 and 45. The prior art of record does not teach the particular contact sequences set forth in claims 36 and 42.


4.) Applicant's remarks in the amendment filed on 6/20/20003 have been given careful consideration, but are not persuasive of patentability in view of the new grounds or rejection set forth above.

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Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 703-308-1712. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Clifford C Shaw  
Primary Examiner  
Art Unit 1725

August 11, 2003